REMARKS:

In response to the requirement for restriction, Applicants provisionally elect with traverse Group I (claims 1-7), and the putative species of direct heat transfer. Applicants submit that all of the claims are consonant with the elected putative species.

Clarification of Claim Numbering

Applicant thanks the Examiner for considering claim 56 to be part of claim 55 and for renumbering claims 57-58 as claims 56-57. The original numbering is a typographical error, but Applicant intended the claims to be numbered as the Examiner has renumbered them.

The Restriction Requirement Between Groups I, II and III Should Be Withdrawn

With respect to the restriction requirement made by the Examiner, Applicants assert that the Examiner has inappropriately characterized Groups I, II and III in his argument for restriction. Also, even if the Examiner had properly characterized Groups I, II and III, he has not made the showing allowing him to properly require such a restriction according to U.S. PTO practice.

The Examiner states that Groups I, II and III are related as product and processes of use, taking the position that the product of Group I may be used in another and materially different process. Applicant asserts that, according to PTO practice, Groups I, II and III are not related as product and processes of use. Rather, they are more appropriately related as element and combinations.

This is because each of the method claims of Groups II and III require each and every limitation of the products of Group I. In other words, Groups II and III are appropriately characterized with the label AB_{sp} while Group I is appropriately characterized with the label B_{sp} (see MPEP Section 806.05(c)).

In order to properly require a restriction for inventions related as combination (AB_{sp}) and element (B_{sp}), the Examiner must indicate that the combination is patentable without requiring the limitations of the element. If the Examiner takes this position, then he is asked to do so on the record. If the Examiner does not take this position, then restriction is not proper, and the Examiner is asked to withdraw the restriction requirement between Group I and Groups II and III.

The Examiner also states that Groups I and IV are related as product made and process of making the product. The Examiner takes the position that the product may be made by the Fritz Haber process for making ammonium or a variant such as the Haber-Bosch process. Applicants submit that the Examiner's grounds for requiring restriction are legally insufficient because the referenced processes (Fritz Haber and Haber-Bosch) do *not* produce the *gas mixture* product of Group I, but rather produce *ammonium*, a completely different product. As such, the Examiner must withdraw the restriction requirement.

The Examiner further states that Groups II and III are unrelated and are distinct due to their (putative) separate status in the art and recognized divergent subject matter. Apparently to support this argument, the Examiner states that the claims of Group II are classified in both Class 65, Subclass 434 and Class 165,

Subclasses 58+; and the claims of Group III are classified in both Class 65, Subclass 365 and Class 165, Subclasses 58+. Applicant respectfully points out that the common classification of the two groups in Class 165, Subclasses 58+ actually supports the finding that the two Groups do *not* have separate status in the art and are *not* recognized divergent subject matter. Rather, Groups II and III are methods of adjusting the temperature of an item using the novel gas mixture of Group I. Thus, this same classification cannot provide a legally sufficient ground for requiring restriction between the two Groups.

With respect to the Examiner's statement that Groups II and III are classified in different subclasses in Class 65, Applicant respectfully points out that in the latest edition of the Manual of Classification (online edition current as of August, 2003), Class 65, Subclass 365 does not exist. As such, the Examiner's alternative argument for showing separate status/divergent subject matter is not shown.

In summary, Applicant respectfully asserts that each of the restriction requirements between Groups I, II and III are either not properly made or have legally deficient grounds in support of them. Therefore, the Examiner must withdraw the restriction requirement.

The Election of Species Requirement Should Be Withdrawn

The Examiner states that the application contains two specie inventions, namely, direct heat transfer and indirect heat transfer. However, the Examiner has not shown why examination of both species is so burdensome as to properly

require an election. Applicant respectfully asserts that search and examination of both direct heat transfer and indirect heat transfer would not be unduly burdensome because a search for the former is coextensive with a search for the latter. As such, the Examiner should withdraw the election of species requirement.

CONCLUSION

In summary, Applicants traverse the Examiner's restriction and election of species requirements and respectfully request search and examination of all the claims.

Should the Examiner believe that a telephone call would expedite prosecution of the application, he is invited to call the undersigned attorney at the number listed below. It is believed that no further fee is due at this time. If that belief is found incorrect, the Commissioner is authorized to debit the assignee's deposit account 01-1375 for any fees necessary for a complete reply to the Office Action of September 22, 2003.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: COMMISSIONER OF PATENTS, P. O. Box 1450, Alexandria, VA. 22313-1450, on this 22nd day of October, 2003.

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